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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,602	07/08/2003	Fernando Encio Martinez	U 014708-0	8294

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EXAMINER
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COLE, ELIZABETH M

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 04/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/615,602

Applicant(s)

MARTINEZ ET AL.

Examiner

Elizabeth M. Cole

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6, 8, 9 and 12-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2 and 12 is/are allowed.
- 6) ☒ Claim(s) 1, 3, 4-6, 8-9, 13-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, 4-6, 8-9, 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Valerius, U.S. Patent No. 3,616,021 in view of JP 58209508 and Applicant's statement of the prior art at page 1, lines 15-24 of the specification. Valerius discloses a laminate material comprising a plurality of sheets of kraft paper which are impregnated with a phenolic resin which form a core of the laminate, (col. 2, lines 40-43), a paper layer which is impregnated with a melamine formaldehyde resin above the core layer, (col. 2, lines 44-45), and a thermoplastic film positioned above the impregnated paper layer, (col. 2, lines 48-49). The thermoplastic film layer may comprise polymethylmethacrylate (col. 3, lines 12-13), blends of polymethylmethacrylate with polyvinylidene fluoride, (col. 3, lines 14-15). Valerius differs from the claimed invention because Valerius does not disclose incorporating a wood layer in the laminate. Applicant's statement of the prior art at page 1, lines 15-24 teaches that it is known to incorporate a wood layer between the kraft paper core and the surface covering layers in order to form a strong board. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included a wood layer in the material of Valerius since such inclusion was well known and produced a strong board as taught by the specification.

3. Valerius also differs from the claimed invention because while Valerius discloses employing a melamine formaldehyde resin, Valerius does not teach the claimed phenolic resin comprising an adhesion promoter such as melamine. JP '508 teaches that adhesives which are blends of phenolic resin and melamine can be used to bond layers in wood composite materials. JP '508 teaches that the phenolic resin enhances the penetration of the resin into the wood and the urea/melamine resin or the melamine resin alone helps to reinforce the surface of the wood. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed the adhesive set forth in JP '508 as the adhesive in Valerius in place of the melamine formaldehyde resin disclosed therein, motivated by the expectation that the adhesive of JP '508 would resin a stronger product which had better resistance to cracking and peeling. With regard to the relative proportions of phenolic resin and urea/melamine or melamine resin, since JP '508 teaches that the phenolic resin enhances penetration of the resin and the melamine or urea/melamine helps to reinforce the surface, the person of ordinary skill in the art would have been motivated to select the appropriate proportions through the process of routine experimentation in order to arrive at an adhesive having the desired properties. A full translation of JP '508 has been ordered and will be included with the next office action.

4. Claim 7, 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Valerius in view of JP '508 and Applicant's specification at page 1, lines 15-24 as applied to claims 1,3,6, above, and further in view of SU 865873. Valerius does not teach that the thermoplastic film should comprise a top layer of polyvinylidene fluoride.

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SU '873 teaches transparent laminated material can comprise a surface layer of polyvinylidene fluoride to improve the durability of the laminate by maintaining transparency in corrosive environments. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated a polyvinylidene fluoride surface layer on the PMMA layer of Valerius, motivated by the expectation that this would enhance the durability of the laminate in corrosive environments.

5. Applicant's arguments filed 2/15/06 have been fully considered but they are not persuasive. Applicant argues that it would not have been obvious to have incorporated the wood layer in between the kraft paper layers and decorative layer but to have instead substituted the wood layer for the decorative layer. However, since the wood layer serves to strengthen the laminate and the prior art statement teaches that it was known to incorporate the layer between the core of kraft paper and the surface layers, it is the examiner's position that one of ordinary skill in this art would have been motivated to include the wood layer rather than to substitute with the expectation that this would strengthen the material of Valerius while maintaining all the benefits of the Valerius laminate. Applicant argues that the specification teaches that the wood is used as a decorative layer rather than as an internal layer. However, the specification clearly teaches disposing the wood as a layer between the surface layer and the kraft paper layers. Therefore the rejection is maintained.

6. With regard to the resin which is used to impregnate the decorative layer, Applicant argues that there is no motivation to employ the resin of JP '508 in the

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laminate of Valerius since in JP '508 the melamine resin is used for a wood panel.

However, JP '508 teaches that adhesives which are blends of phenolic resin and melamine can be used to bond layers in wood composite materials. JP '508 teaches that the phenolic resin enhances the penetration of the resin into the wood and the urea/melamine resin or the melamine resin alone helps to reinforce the surface of the wood. Therefore, one of ordinary skill in the art would have been motivated to employ the resin of JP '508 to bond the layers including the additional wood layer in the laminate of Valerius, motivated by the expectation that the adhesive of JP '508 would resin a stronger product which had better resistance to cracking and peeling. Applicant argues that there is not motivation to include the JP '805 resin into a substrate layer rather than a wood core. However, Valerius already teaches the melamine formaldehyde resin in the paper layer. JP '508 is only relied on to show that it was known to use the blend of phenolic resin and melamine in order to enhance the strength of the product and which had a better resistance to cracking and peeling. Applicant argues that in Valerius the alpha cellulose paper layer is not comparable to the claimed substrate layer because in the instant invention the substrate layer functions as an adhesion promoter between the coating film and the wood layer while the paper layer of Valerius does not function in this way. However, as set forth above, Valerius teaches the film layer and the underlying base layers, it just does not teach the wood layer. However, the specification teaches that it is well known to incorporate the wood layer into such panels. Therefore, the resulting structure would be the same, and the paper layer would be in the same position as the claimed substrate layer.

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7. With regard to claims 7 and 10-11, Applicant argues that there is no motivation in SU '873 to use a PDVF layer in the claimed coating film. However, SU '873 teaches that using the PDVF layer enhances the durability of the layer and therefore SU '873 provides the motivation to make the combination.

8. Claims 2 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter: None of the prior art teaches or suggests employing a combination of a phenolic resin in the claimed amount with an acrylic polymer in the claimed amount to impregnate a paper layer in a laminated board having the claimed structure.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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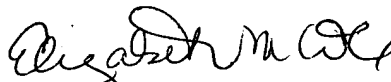
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth M. Cole whose telephone number is (571) 272-1475. The examiner may be reached between 6:30 AM and 6:00 PM Monday through Wednesday, and 6:30 AM and 2 PM on Thursday.

Mr. Terrel Morris, the examiner's supervisor, may be reached at (571) 272-1478.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

The fax number for all official faxes is (571) 273-8300.



Elizabeth M. Cole  
Primary Examiner  
Art Unit 1771

e.m.c